

07022000 MISSISSIPPI RIVER AT THEBES, IL

Mississippi River Main Stem

LOCATION.--Lat 37°13'17.76", long 89°27'46.71" referenced to North American Datum of 1983, in sec.17, T.15 S., R.3 W., Alexander County, IL, Hydrologic Unit 07140105, near center span on downstream side of railroad bridge at Thebes, Illinois, 5.0 mi downstream from Headwater Diversion Channel, and at mile 44.0 above Ohio River.

DRAINAGE AREA.--713,200 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--

DISCHARGE: October 1932 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to April 1941, published as "at Cape Girardeau, Mo".

GAGE HEIGHT: March 1933 to February 1938 and October 1939 to current year. Prior to April 1941, published as "at Cape Girardeau, Mo". Since November 1878, under name of "at Grays Point" in files of the U.S. Army Corps of Engineers; January 1879 to May of 1896, published as "at Grays Point"; since May 1896, published as "at Cape Girardeau" in reports of the Mississippi River Commission; February 1891 to February 1894 and since 1904, published as "at Cape Girardeau" in reports of the National Weather Service.

REVISED RECORDS.--WSP 1341: 1844(M). WDR MO-76-1: Drainage area, WDR MO-98-1: Extreme outside period of record.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft above National Geodetic Vertical Datum of 1929. Mar. 17, 1933, to Dec. 21, 1934, nonrecording gage; Dec. 22, 1934, to Apr. 4, 1941, water-stage recorder, at site 8.2 mi upstream at datum 4.65 ft higher; Apr. 5, 1941, to Sept. 30, 1941, nonrecording gage at present site and datum; Oct. 1, 1941, to Oct. 11, 1943, at datum 0.07 ft higher. Prior to Apr. 5, 1941, various auxiliary gages used. Since Oct. 1, 1943, former gage at Cape Girardeau used as auxiliary gage.

REMARKS.--Water-discharge records poor. Natural flow of stream affected by many reservoirs and navigation dams in the upper Mississippi River Basin and by many reservoirs and diversions for irrigation in the Missouri River Basin.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 4, 1844, reached an elevation of 345.14 ft, present datum, at Grays Point, from floodmarks, discharge, 1,075,000 ft³/s, computed by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 369,000 ft³/s, March 26, daily value, gage height, unknown, occurred during period of missing record; minimum discharge, 71,700 ft³/s, Sept. 26, gage height, 4.17 ft.

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|----------|---------|---------|
| 1 | 207,000 | 119,000 | 173,000 | 169,000 | 153,000 | 126,000 | 262,000 | 217,000 | 158,000 | 163,000 | e96,100 | 87,100 |
| 2 | 205,000 | 114,000 | 171,000 | 166,000 | 156,000 | 133,000 | 260,000 | 244,000 | 160,000 | 164,000 | e96,300 | 92,600 |
| 3 | 199,000 | 112,000 | 168,000 | 163,000 | 160,000 | 133,000 | 263,000 | 279,000 | 167,000 | 168,000 | e94,900 | 103,000 |
| 4 | 195,000 | 113,000 | 164,000 | 153,000 | 161,000 | 134,000 | 265,000 | 301,000 | 172,000 | 174,000 | e92,800 | 110,000 |
| 5 | 191,000 | 123,000 | 181,000 | 146,000 | 168,000 | 140,000 | 268,000 | 296,000 | 174,000 | 172,000 | e91,000 | 107,000 |
| 6 | 185,000 | 130,000 | 186,000 | 146,000 | 182,000 | 149,000 | 269,000 | 292,000 | 178,000 | 168,000 | e88,700 | 99,500 |
| 7 | 175,000 | 130,000 | 178,000 | 136,000 | 187,000 | 161,000 | 249,000 | 319,000 | 185,000 | 163,000 | e86,500 | 95,300 |
| 8 | 165,000 | 129,000 | 177,000 | 129,000 | 192,000 | 178,000 | 222,000 | 343,000 | 192,000 | 163,000 | e85,200 | 91,900 |
| 9 | 155,000 | 136,000 | 180,000 | 122,000 | 197,000 | 184,000 | 201,000 | 351,000 | 196,000 | 166,000 | e86,900 | 91,600 |
| 10 | 153,000 | 144,000 | 185,000 | 115,000 | 194,000 | 178,000 | 186,000 | 349,000 | 194,000 | 169,000 | e87,900 | 94,300 |
| 11 | 149,000 | 150,000 | 186,000 | 117,000 | 183,000 | 170,000 | 180,000 | 347,000 | 192,000 | 160,000 | 87,900 | 93,100 |
| 12 | 140,000 | 154,000 | 177,000 | 118,000 | 171,000 | 160,000 | 178,000 | 338,000 | 192,000 | 149,000 | 84,800 | 91,200 |
| 13 | 132,000 | 157,000 | 168,000 | 117,000 | 159,000 | e166,000 | 171,000 | 326,000 | 194,000 | 139,000 | 79,300 | 85,800 |
| 14 | 127,000 | 159,000 | 163,000 | 116,000 | 143,000 | e171,000 | 165,000 | 310,000 | 193,000 | 135,000 | 77,100 | 78,800 |
| 15 | 125,000 | 169,000 | 176,000 | 115,000 | 131,000 | e180,000 | 166,000 | 298,000 | 192,000 | 128,000 | 76,400 | 74,400 |
| 16 | 126,000 | 171,000 | 181,000 | 112,000 | 131,000 | e191,000 | 209,000 | 287,000 | 188,000 | 121,000 | 77,100 | 73,400 |
| 17 | 126,000 | 169,000 | 184,000 | 111,000 | 131,000 | e211,000 | 289,000 | 279,000 | 187,000 | 117,000 | 78,600 | 73,400 |
| 18 | 128,000 | 164,000 | 199,000 | 110,000 | 132,000 | e237,000 | 306,000 | 271,000 | 187,000 | 113,000 | e79,200 | 72,900 |
| 19 | 131,000 | 154,000 | 212,000 | 110,000 | 134,000 | e256,000 | 304,000 | 262,000 | 186,000 | 111,000 | e79,400 | 74,700 |
| 20 | 133,000 | 145,000 | 221,000 | 113,000 | 138,000 | e247,000 | 308,000 | 258,000 | 181,000 | 110,000 | e79,300 | 79,300 |
| 21 | 133,000 | 146,000 | 232,000 | 114,000 | 138,000 | e232,000 | 310,000 | 259,000 | 176,000 | 108,000 | e78,900 | 78,700 |
| 22 | 131,000 | 148,000 | 241,000 | 115,000 | 134,000 | e224,000 | 289,000 | 260,000 | 166,000 | e105,000 | e79,600 | 76,200 |
| 23 | 127,000 | 152,000 | 247,000 | 123,000 | 130,000 | e258,000 | 263,000 | 254,000 | 159,000 | e104,000 | e79,700 | 75,000 |
| 24 | 124,000 | 154,000 | 246,000 | 130,000 | 127,000 | e338,000 | 246,000 | 237,000 | 156,000 | e105,000 | e78,900 | 74,000 |
| 25 | 121,000 | 150,000 | 233,000 | 133,000 | 127,000 | e364,000 | 232,000 | 221,000 | 159,000 | e103,000 | e78,400 | 72,800 |
| 26 | 121,000 | 144,000 | 215,000 | 132,000 | 128,000 | e369,000 | 219,000 | 208,000 | 161,000 | e99,400 | e78,100 | 72,200 |
| 27 | 121,000 | 150,000 | 205,000 | 141,000 | 126,000 | e366,000 | 208,000 | 188,000 | 159,000 | e96,400 | e77,000 | 75,400 |
| 28 | 122,000 | 152,000 | 201,000 | 150,000 | 124,000 | e352,000 | 198,000 | 162,000 | 158,000 | e95,600 | e77,200 | 83,500 |
| 29 | 124,000 | 161,000 | 190,000 | 152,000 | 124,000 | e322,000 | 195,000 | 148,000 | 157,000 | e95,500 | e77,400 | 85,300 |
| 30 | 123,000 | 169,000 | 182,000 | 152,000 | --- | 299,000 | 207,000 | 151,000 | 160,000 | e95,400 | 81,600 | 84,000 |
| 31 | 122,000 | --- | 176,000 | 151,000 | --- | 274,000 | --- | 158,000 | --- | e95,200 | 84,600 | --- |
| Mean | 145,700 | 145,600 | 193,500 | 131,500 | 150,400 | 222,700 | 236,300 | 264,900 | 176,000 | 130,800 | 83,120 | 84,880 |
| Max | 207,000 | 171,000 | 247,000 | 169,000 | 197,000 | 369,000 | 310,000 | 351,000 | 196,000 | 174,000 | 96,300 | 110,000 |
| Min | 121,000 | 112,000 | 163,000 | 110,000 | 124,000 | 126,000 | 165,000 | 148,000 | 156,000 | 95,200 | 76,400 | 72,200 |
| In. | 0.24 | 0.23 | 0.31 | 0.21 | 0.23 | 0.36 | 0.37 | 0.43 | 0.28 | 0.21 | 0.13 | 0.13 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2012, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Mean | 152,300 | 159,700 | 144,400 | 140,800 | 166,800 | 256,700 | 331,100 | 333,200 | 299,000 | 245,500 | 162,100 | 147,400 |
| Max | 589,600 | 474,000 | 531,700 | 341,300 | 350,400 | 542,000 | 731,000 | 655,800 | 584,100 | 765,500 | 768,000 | 539,300 |
| (WY) | (1987) | (2010) | (1983) | (2005) | (1974) | (1985) | (1973) | (1973) | (1947) | (1993) | (1993) | (1993) |
| Min | 45,500 | 50,080 | 53,850 | 33,650 | 46,920 | 80,260 | 115,600 | 88,170 | 72,350 | 73,290 | 45,000 | 59,890 |
| (WY) | (1940) | (1940) | (1956) | (1940) | (1940) | (1934) | (1934) | (1934) | (1934) | (1936) | (1936) | (1937) |

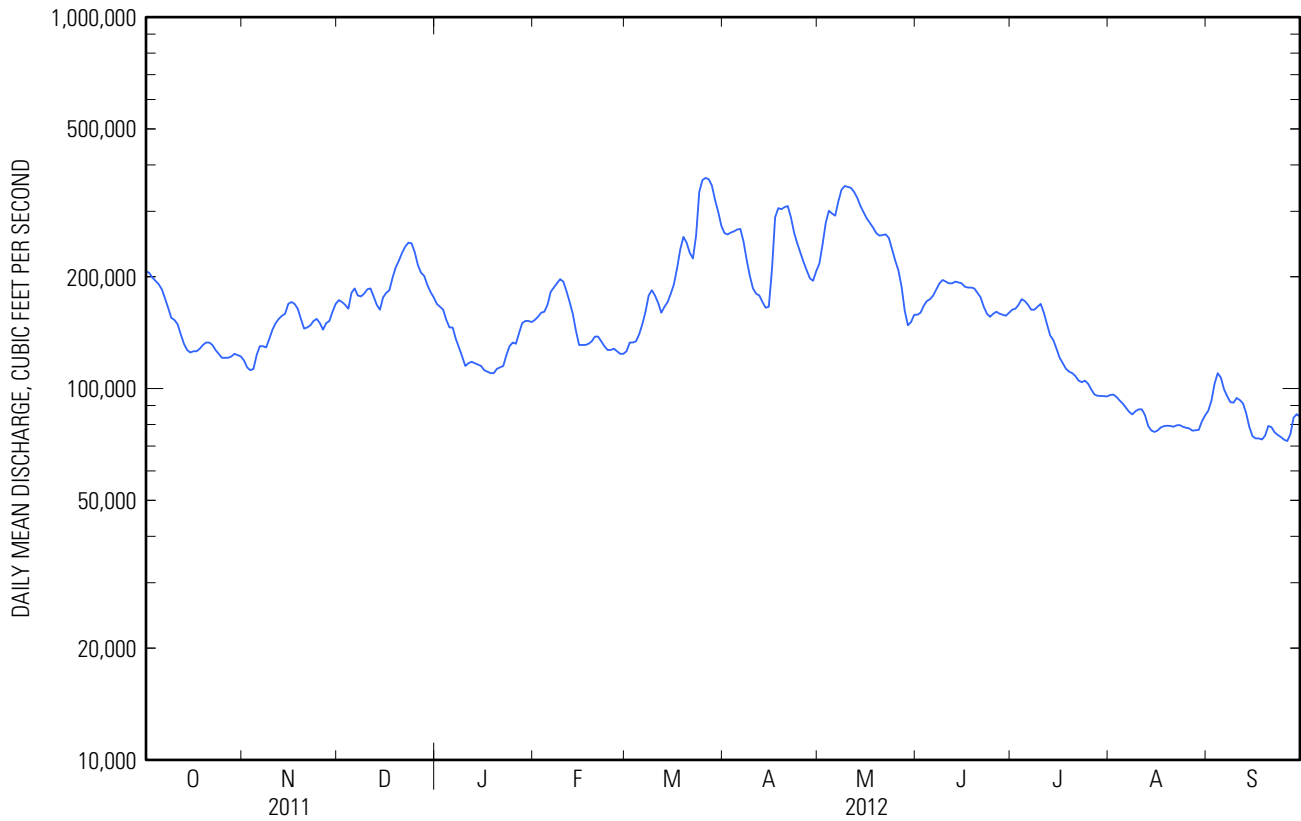
07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

SUMMARY STATISTICS

| | Calendar Year 2011 | | Water Year 2012 | | Water Years 1933 - 2012 | |
|---------------------------------|--------------------|--------|----------------------|--------|-------------------------|--------------|
| Annual mean | 341,200 | | 163,900 | | 212,000 | |
| Highest annual mean | | | | | 446,000 | 1993 |
| Lowest annual mean | | | | | 71,730 | 1934 |
| Highest daily mean | 853,000 | May 2 | 369,000 | Mar 26 | 978,000 | Aug 7, 1993 |
| Lowest daily mean | 112,000 | Nov 3 | 72,200 | Sep 26 | 24,700 | Jan 21, 1940 |
| Annual seven-day minimum | 118,000 | Oct 30 | 74,900 | Sep 21 | 26,700 | Jan 20, 1940 |
| Maximum peak flow | | | ^a 369,000 | Mar 26 | 996,000 | Aug 7, 1993 |
| Maximum peak stage | | | ^b Unknown | Mar 26 | 45.91 | May 23, 1995 |
| Instantaneous low flow | | | 71,700 | Sep 26 | 23,400 | Dec 13, 1937 |
| Annual runoff (inches) | 6.50 | | 3.13 | | 4.04 | |
| 10 percent exceeds | 595,000 | | 262,000 | | 418,000 | |
| 50 percent exceeds | 343,000 | | 158,000 | | 169,000 | |
| 90 percent exceeds | 131,000 | | 85,100 | | 77,900 | |

^a Daily value

^b Occurred during period of missing record.



07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
OBSERVATION AT 0800
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1 | 17.29 | 10.02 | 16.27 | 16.01 | 15.99 | 11.60 | 21.17 | 18.02 | 13.85 | 14.21 | e7.67 | 6.43 |
| 2 | 17.36 | 9.66 | 16.55 | 15.65 | 16.35 | 12.29 | 20.93 | 19.60 | 13.92 | 14.31 | e7.71 | 7.01 |
| 3 | 16.73 | 9.26 | 16.62 | 15.71 | 16.67 | 12.36 | 21.12 | 21.82 | 14.51 | 14.51 | e7.57 | 7.99 |
| 4 | 16.55 | 9.26 | 16.62 | 14.96 | 16.81 | 12.46 | 21.32 | 23.28 | 14.89 | 15.09 | e7.33 | 9.03 |
| 5 | 16.27 | 10.23 | 18.44 | 14.07 | 17.25 | 12.96 | 21.31 | 23.21 | 15.07 | 15.00 | e7.10 | 8.86 |
| 6 | 15.87 | 11.10 | 19.39 | 13.77 | 17.95 | 13.71 | 21.63 | 22.56 | 15.27 | 14.72 | e6.81 | 7.93 |
| 7 | 14.99 | 11.21 | 18.78 | 12.84 | 18.23 | 14.63 | 20.60 | 24.00 | 15.90 | 14.28 | e6.54 | 7.42 |
| 8 | 14.34 | 11.04 | 18.38 | 12.04 | 18.15 | 15.98 | 18.91 | 25.41 | 16.35 | 14.20 | e6.30 | 6.99 |
| 9 | 13.49 | 11.33 | 18.44 | 11.45 | 18.14 | 17.01 | 17.32 | 25.92 | 16.77 | 14.42 | e6.48 | 6.82 |
| 10 | 13.20 | 12.29 | 18.76 | 10.66 | 17.75 | 16.91 | 16.18 | 25.79 | 16.68 | 14.80 | e6.66 | 7.16 |
| 11 | 12.96 | 12.86 | 19.06 | 10.86 | 16.69 | 16.60 | 15.60 | 25.69 | 16.52 | 14.14 | 6.70 | 7.39 |
| 12 | 12.16 | 13.25 | 18.59 | 10.90 | 15.84 | 15.78 | 15.46 | 25.32 | 16.43 | 13.16 | 6.42 | 6.93 |
| 13 | 11.37 | 13.46 | 17.98 | --- | 14.95 | --- | 14.98 | 24.77 | 16.60 | 12.29 | 5.59 | 6.29 |
| 14 | 10.91 | 13.60 | 17.48 | 10.69 | 13.62 | --- | 14.45 | 23.93 | 16.61 | 11.80 | 5.20 | 5.33 |
| 15 | 10.63 | 14.55 | 18.34 | 10.64 | 12.34 | --- | 14.15 | 23.17 | 16.47 | 11.31 | 5.09 | 4.60 |
| 16 | 10.73 | 14.61 | 18.87 | 10.29 | 12.12 | --- | 16.58 | 22.61 | 16.20 | 10.49 | 5.16 | 4.43 |
| 17 | 10.75 | 14.53 | 18.50 | 10.16 | 12.22 | --- | 22.38 | 22.18 | 16.09 | 10.11 | 5.44 | 4.43 |
| 18 | 10.87 | 14.22 | 19.03 | 9.96 | 12.31 | --- | 23.64 | 21.70 | 16.07 | 9.64 | e5.51 | 4.32 |
| 19 | 11.20 | 13.39 | 19.58 | 10.02 | 12.43 | --- | 23.47 | 21.20 | 16.12 | 9.39 | e5.53 | 4.50 |
| 20 | 11.41 | 12.57 | 19.71 | 10.30 | 12.81 | --- | 23.64 | 20.86 | 15.69 | 9.31 | e5.52 | 5.25 |
| 21 | 11.40 | 12.64 | 20.05 | 10.47 | 12.99 | --- | 23.96 | 20.89 | 15.34 | 9.15 | e5.45 | 5.24 |
| 22 | 11.26 | 12.83 | 20.58 | 10.51 | 12.56 | --- | 22.91 | 21.02 | 14.64 | 8.70 | e5.53 | 4.88 |
| 23 | 10.90 | 13.34 | 20.98 | 11.27 | 12.24 | --- | 21.34 | 20.72 | 13.96 | --- | e5.58 | 4.71 |
| 24 | 10.60 | 13.67 | 21.06 | 12.12 | 11.82 | --- | 20.26 | 19.75 | 13.65 | --- | e5.49 | 4.56 |
| 25 | 10.26 | 13.37 | 20.21 | 12.86 | 11.84 | --- | 19.41 | 18.70 | 13.88 | e8.58 | e5.39 | 4.33 |
| 26 | 10.25 | 12.99 | 19.14 | 13.02 | 11.96 | --- | 18.52 | 17.80 | 14.02 | e8.18 | e5.38 | 4.21 |
| 27 | 10.17 | 13.50 | 18.36 | 13.81 | 11.74 | --- | 17.73 | 16.60 | 13.90 | e7.74 | e5.08 | 4.49 |
| 28 | 10.33 | 13.75 | 18.19 | 14.80 | 11.48 | --- | 17.05 | 14.40 | 13.79 | e7.63 | e4.80 | 5.79 |
| 29 | 10.57 | 14.46 | 17.62 | 15.36 | 11.54 | --- | 16.54 | 13.00 | 13.72 | e7.60 | e5.13 | 6.07 |
| 30 | 10.45 | 15.59 | 16.91 | 15.66 | --- | 23.53 | 17.35 | 13.12 | 13.94 | e7.61 | 5.77 | 5.91 |
| 31 | 10.29 | --- | 16.54 | 15.87 | --- | 21.94 | --- | 13.80 | --- | e7.56 | 6.11 | --- |
| Mean | 12.44 | 12.62 | 18.55 | --- | 14.37 | --- | 19.33 | 20.99 | 15.23 | --- | 6.00 | 5.98 |
| Max | 17.36 | 15.59 | 21.06 | --- | 18.23 | --- | 23.96 | 25.92 | 16.77 | --- | 7.71 | 9.03 |
| Min | 10.17 | 9.26 | 16.27 | --- | 11.48 | --- | 14.15 | 13.00 | 13.65 | --- | 4.80 | 4.21 |

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1974 to September 1981.

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

SUSPENDED-SEDIMENT: October 1980 to current year.

REMARKS.--National Stream-Quality Accounting Network (NASQAN) station January 1973 to September 1986. Illinois Environmental Protection Agency station October 1986 to September 1994 (during this period, samples were analyzed by the Illinois EPA). Re-established as a NASQAN station October 1994 to current year. Suspended-sediment station 1980 to current year. Sediment records good, except for estimated days which are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 31.5 °C, July 10, 11, 1975, and July 17, 1977; minimum daily, 0.0 °C, on several days during winter periods.

SPECIFIC CONDUCTANCE: Maximum daily, 705 microsiemens per centimeter, Aug. 5-7, 1980; minimum daily, 272 microsiemens per centimeter, Apr. 6, 1979.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily, 3,890 mg/L, Dec. 22, 1985; minimum daily, 13 mg/L, Jan. 28, 1981.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 6,280,000 tons, Mar. 1, 1985; minimum daily, 2,530 tons, Jan. 28, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 914 mg/L, Apr. 24; minimum daily mean, 57 mg/L, Aug. 28.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 742,000 tons (estimated), Mar. 26; minimum daily, 12,000 tons (estimated), Aug. 27.

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[e, estimated]

| Day | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) |
|--------------|-------------------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------|-------------------------------|
| | October | | | November | | | December | | |
| 1 | 207,000 | 92 | 49,900 | 119,000 | 83 | 26,500 | 173,000 | 130 | 60,800 |
| 2 | 205,000 | 140 | 77,700 | 114,000 | 96 | 29,600 | 171,000 | 109 | 50,400 |
| 3 | 199,000 | 131 | 70,500 | 112,000 | 104 | 31,300 | 168,000 | 102 | 46,100 |
| 4 | 195,000 | 131 | 69,100 | 113,000 | 97 | 29,600 | 164,000 | 121 | 53,500 |
| 5 | 191,000 | e136 | e70,500 | 123,000 | 97 | 32,100 | 181,000 | 168 | 82,500 |
| 6 | 185,000 | 125 | 62,500 | 130,000 | 100 | 35,000 | 186,000 | 154 | 77,300 |
| 7 | 175,000 | 127 | 60,000 | 130,000 | 82 | 28,900 | 178,000 | 110 | 52,700 |
| 8 | 165,000 | 131 | 58,600 | 129,000 | 74 | 25,700 | 177,000 | 96 | 45,600 |
| 9 | 155,000 | 131 | 55,100 | 136,000 | 81 | 29,700 | 180,000 | 87 | 42,100 |
| 10 | 153,000 | e125 | e51,800 | 144,000 | 89 | 34,600 | 185,000 | 95 | 47,500 |
| 11 | 149,000 | 107 | 43,000 | 150,000 | 103 | 41,600 | 186,000 | 86 | 43,200 |
| 12 | 140,000 | 104 | 39,300 | 154,000 | 109 | 45,300 | 177,000 | 78 | 37,000 |
| 13 | 132,000 | e111 | e39,500 | 157,000 | 107 | 45,500 | 168,000 | 85 | 38,700 |
| 14 | 127,000 | e115 | e39,400 | 159,000 | 117 | 50,200 | 163,000 | 104 | 46,000 |
| 15 | 125,000 | 115 | 38,700 | 169,000 | 121 | 55,000 | 176,000 | e133 | e63,400 |
| 16 | 126,000 | 121 | 41,300 | 171,000 | 93 | 43,100 | 181,000 | e142 | e69,700 |
| 17 | 126,000 | 118 | 40,200 | 169,000 | 84 | 38,300 | 184,000 | 139 | 69,200 |
| 18 | 128,000 | 109 | 37,500 | 164,000 | 77 | 34,000 | 199,000 | 117 | 63,000 |
| 19 | 131,000 | 121 | 42,500 | 154,000 | 80 | 33,200 | 212,000 | 119 | 68,100 |
| 20 | 133,000 | 133 | 47,600 | 145,000 | 73 | 28,700 | 221,000 | 131 | 77,900 |
| 21 | 133,000 | 119 | 42,700 | 146,000 | 76 | 29,700 | 232,000 | 153 | 96,200 |
| 22 | 131,000 | 101 | 35,900 | 148,000 | 107 | 42,600 | 241,000 | 216 | 140,000 |
| 23 | 127,000 | 93 | 31,800 | 152,000 | 134 | 54,800 | 247,000 | 252 | 168,000 |
| 24 | 124,000 | 90 | 30,100 | 154,000 | 100 | 41,600 | 246,000 | 273 | 181,000 |
| 25 | 121,000 | 95 | 31,100 | 150,000 | 94 | 38,200 | 233,000 | 264 | 166,000 |
| 26 | 121,000 | 103 | 33,700 | 144,000 | 92 | 35,600 | 215,000 | e240 | e140,000 |
| 27 | 121,000 | 105 | 34,200 | 150,000 | 100 | 40,500 | 205,000 | 216 | 120,000 |
| 28 | 122,000 | 107 | 35,100 | 152,000 | e93 | e38,200 | 201,000 | 176 | 95,600 |
| 29 | 124,000 | 100 | 33,600 | 161,000 | 103 | 44,600 | 190,000 | 141 | 72,400 |
| 30 | 123,000 | 90 | 29,900 | 169,000 | e117 | e53,300 | 182,000 | 127 | 62,600 |
| 31 | 122,000 | 86 | 28,200 | --- | --- | --- | 176,000 | e123 | e58,400 |
| Total | 4,516,000 | --- | 1,401,000 | 4,368,000 | --- | 1,137,000 | 5,998,000 | --- | 2,434,900 |

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[e, estimated]

| Day | Mean | Mean | Sediment | Mean | Mean | Sediment | Mean | Mean | Sediment |
|--------------|----------------------|---------------|------------|----------------------|---------------|------------|----------------------|---------------|------------|
| | discharge | concentration | discharge | discharge | concentration | discharge | discharge | concentration | discharge |
| | (ft ³ /s) | (mg/L) | (tons/day) | (ft ³ /s) | (mg/L) | (tons/day) | (ft ³ /s) | (mg/L) | (tons/day) |
| | January | | | February | | | March | | |
| 1 | 169,000 | 128 | 58,300 | 153,000 | 98 | 40,400 | 126,000 | 68 | 23,000 |
| 2 | 166,000 | e112 | e50,400 | 156,000 | 85 | 36,000 | 133,000 | 71 | 25,300 |
| 3 | 163,000 | 96 | 42,200 | 160,000 | 78 | 33,500 | 133,000 | 84 | 30,100 |
| 4 | 153,000 | 83 | 34,300 | 161,000 | 76 | 33,000 | 134,000 | 85 | 30,900 |
| 5 | 146,000 | 75 | 29,600 | 168,000 | 100 | 45,500 | 140,000 | 97 | 36,600 |
| 6 | 146,000 | 73 | 28,700 | 182,000 | 173 | 85,200 | 149,000 | 115 | 46,400 |
| 7 | 136,000 | 71 | 25,900 | 187,000 | 197 | 99,600 | 161,000 | 114 | 49,900 |
| 8 | 129,000 | 70 | 24,200 | 192,000 | 176 | 91,000 | 178,000 | 135 | 65,100 |
| 9 | 122,000 | 67 | 21,900 | 197,000 | 159 | 84,600 | 184,000 | 138 | 68,400 |
| 10 | 115,000 | 79 | 24,600 | 194,000 | 143 | 74,900 | 178,000 | 124 | 59,900 |
| 11 | 117,000 | e81 | e25,600 | 183,000 | 161 | 79,500 | 170,000 | 110 | 50,600 |
| 12 | 118,000 | 80 | 25,600 | 171,000 | 153 | 70,900 | 160,000 | 112 | 48,300 |
| 13 | 117,000 | 75 | 23,700 | 159,000 | 129 | 55,400 | e166,000 | 118 | e50,600 |
| 14 | 116,000 | e71 | e22,300 | 143,000 | 117 | 45,500 | e171,000 | 192 | e52,000 |
| 15 | 115,000 | 67 | 20,600 | 131,000 | 115 | 40,800 | e180,000 | 113 | e55,000 |
| 16 | 112,000 | 71 | 21,400 | 131,000 | 105 | 37,100 | e191,000 | 120 | e62,000 |
| 17 | 111,000 | 90 | 27,000 | 131,000 | 97 | 34,500 | e211,000 | 140 | e80,000 |
| 18 | 110,000 | 88 | 26,000 | 132,000 | 88 | 31,200 | e237,000 | e142 | e91,000 |
| 19 | 110,000 | 85 | 25,200 | 134,000 | 82 | 29,700 | e256,000 | 166 | e115,000 |
| 20 | 113,000 | 82 | 24,800 | 138,000 | 75 | 27,900 | e247,000 | 241 | e161,000 |
| 21 | 114,000 | 64 | 19,600 | 138,000 | 77 | 28,700 | e232,000 | 236 | e148,000 |
| 22 | 115,000 | 65 | 20,200 | 134,000 | 72 | 26,100 | e224,000 | 176 | e106,000 |
| 23 | 123,000 | 100 | 33,500 | 130,000 | 63 | 22,000 | e258,000 | 154 | e107,000 |
| 24 | 130,000 | e126 | e44,100 | 127,000 | 68 | 23,100 | e338,000 | 193 | e176,000 |
| 25 | 133,000 | 142 | 51,000 | 127,000 | 61 | 21,000 | e364,000 | 616 | e606,000 |
| 26 | 132,000 | 137 | 49,000 | 128,000 | 62 | 21,300 | e369,000 | 744 | e742,000 |
| 27 | 141,000 | 205 | 78,300 | 126,000 | 66 | 22,500 | e366,000 | 651 | e644,000 |
| 28 | 150,000 | 227 | 91,700 | 124,000 | 65 | 21,700 | e352,000 | 575 | e547,000 |
| 29 | 152,000 | 162 | 66,300 | 124,000 | 80 | 26,600 | e322,000 | 489 | e433,000 |
| 30 | 152,000 | 122 | 50,400 | --- | --- | --- | 299,000 | 366 | 297,000 |
| 31 | 151,000 | 110 | 44,900 | --- | --- | --- | 274,000 | 252 | 186,000 |
| Total | 4,077,000 | --- | 1,131,300 | 4,361,000 | --- | 1,289,200 | 6,903,000 | --- | 5,193,100 |

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[e, estimated]

| Day | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/day) |
|--------------|-------------------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------|-------------------------------|
| | April | | | May | | | June | | |
| 1 | 262,000 | 209 | 148,000 | 217,000 | 225 | 132,000 | 158,000 | 102 | 43,800 |
| 2 | 260,000 | 180 | 126,000 | 244,000 | 219 | 145,000 | 160,000 | 92 | 40,000 |
| 3 | 263,000 | 196 | 140,000 | 279,000 | 322 | 244,000 | 167,000 | 97 | 43,700 |
| 4 | 265,000 | 282 | 201,000 | 301,000 | 500 | 406,000 | 172,000 | 100 | 46,500 |
| 5 | 268,000 | 347 | 251,000 | 296,000 | 477 | 382,000 | 174,000 | 105 | 49,200 |
| 6 | 269,000 | 332 | 241,000 | 292,000 | 364 | 286,000 | 178,000 | 95 | 45,500 |
| 7 | 249,000 | 279 | 188,000 | 319,000 | 326 | 281,000 | 185,000 | 100 | 50,100 |
| 8 | 222,000 | 278 | 167,000 | 343,000 | 433 | 401,000 | 192,000 | 107 | 55,300 |
| 9 | 201,000 | 280 | 152,000 | 351,000 | 551 | 521,000 | 196,000 | 113 | 59,700 |
| 10 | 186,000 | 285 | 143,000 | 349,000 | 606 | 571,000 | 194,000 | 118 | 61,900 |
| 11 | 180,000 | 228 | 111,000 | 347,000 | 650 | 608,000 | 192,000 | 139 | 72,300 |
| 12 | 178,000 | 182 | 87,300 | 338,000 | e604 | e551,000 | 192,000 | 155 | 80,500 |
| 13 | 171,000 | 162 | 74,700 | 326,000 | 514 | 453,000 | 194,000 | 146 | 76,200 |
| 14 | 165,000 | 159 | 70,600 | 310,000 | 454 | 380,000 | 193,000 | 126 | 66,000 |
| 15 | 166,000 | 154 | 69,000 | 298,000 | 433 | 348,000 | 192,000 | 114 | 58,900 |
| 16 | 209,000 | 224 | 129,000 | 287,000 | 365 | 283,000 | 188,000 | 109 | 55,100 |
| 17 | 289,000 | 457 | 359,000 | 279,000 | 305 | 230,000 | 187,000 | 100 | 50,400 |
| 18 | 306,000 | 555 | 460,000 | 271,000 | 251 | 184,000 | 187,000 | 87 | 44,000 |
| 19 | 304,000 | 410 | 336,000 | 262,000 | 237 | 168,000 | 186,000 | 79 | 39,700 |
| 20 | 308,000 | 383 | 318,000 | 258,000 | 228 | 159,000 | 181,000 | 77 | 37,400 |
| 21 | 310,000 | 437 | 365,000 | 259,000 | 220 | 154,000 | 176,000 | 79 | 37,400 |
| 22 | 289,000 | 562 | 437,000 | 260,000 | 190 | 134,000 | 166,000 | 96 | 43,100 |
| 23 | 263,000 | 748 | 531,000 | 254,000 | 175 | 120,000 | 159,000 | 121 | 51,900 |
| 24 | 246,000 | 914 | 606,000 | 237,000 | 156 | 99,800 | 156,000 | 119 | 50,400 |
| 25 | 232,000 | 842 | 528,000 | 221,000 | 150 | 89,800 | 159,000 | 128 | 55,100 |
| 26 | 219,000 | 584 | 346,000 | 208,000 | 141 | 79,300 | 161,000 | 129 | 55,700 |
| 27 | 208,000 | 419 | 236,000 | 188,000 | 131 | 66,500 | 159,000 | 137 | 58,800 |
| 28 | 198,000 | 322 | 173,000 | 162,000 | 126 | 55,300 | 158,000 | 138 | 58,500 |
| 29 | 195,000 | 242 | 127,000 | 148,000 | 126 | 50,300 | 157,000 | 124 | 52,800 |
| 30 | 207,000 | 211 | 118,000 | 151,000 | 116 | 47,600 | 160,000 | 120 | 52,100 |
| 31 | --- | --- | --- | 158,000 | 106 | 45,100 | --- | --- | --- |
| Total | 7,088,000 | --- | 7,238,600 | 8,213,000 | --- | 7,674,700 | 5,279,000 | --- | 1,592,000 |

07022000 MISSISSIPPI RIVER AT THEBES, IL—Continued

**SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
 WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

[e, estimated]

| Day | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/ day) | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/ day) | | | |
|--------------|---|---------------------------------|---|---|---------------------------------|---|---|---------------------------------|---|
| | | | | | | | Mean discharge (ft ³ /s) | Mean concentration (mg/L) | Sediment discharge (tons/ day) |
| | | | July | August | | | September | | |
| 1 | 163,000 | 113 | 49,700 | e96,100 | 66 | e17,500 | 87,100 | 78 | 18,300 |
| 2 | 164,000 | 107 | 47,100 | e96,300 | 63 | e16,600 | 92,600 | e100 | e25,000 |
| 3 | 168,000 | 95 | 42,900 | e94,900 | 63 | e16,400 | 103,000 | 91 | 25,100 |
| 4 | 174,000 | 85 | 39,800 | e92,800 | 62 | e16,000 | 110,000 | 91 | 27,000 |
| 5 | 172,000 | 90 | 41,700 | e91,000 | 65 | e16,500 | 107,000 | 74 | 21,500 |
| 6 | 168,000 | 95 | 43,100 | e88,700 | 69 | e16,700 | 99,500 | 71 | 19,000 |
| 7 | 163,000 | 103 | 45,500 | e86,500 | 73 | e17,100 | 95,300 | 82 | 21,000 |
| 8 | 163,000 | 103 | 45,200 | e85,200 | 74 | e17,000 | 91,900 | 86 | 21,300 |
| 9 | 166,000 | 97 | 43,600 | e86,900 | 74 | e17,200 | 91,600 | 88 | 21,700 |
| 10 | 169,000 | 98 | 44,600 | e87,900 | 69 | e16,500 | 94,300 | 98 | 24,800 |
| 11 | 160,000 | e108 | e46,600 | 87,900 | 70 | 16,600 | 93,100 | 90 | 23,100 |
| 12 | 149,000 | e115 | e46,200 | 84,800 | 69 | 15,900 | 91,200 | 76 | 18,700 |
| 13 | 139,000 | 102 | 38,500 | 79,300 | 65 | 14,000 | 85,800 | 74 | 17,100 |
| 14 | 135,000 | 96 | 35,000 | 77,100 | 74 | 15,400 | 78,800 | 78 | 16,600 |
| 15 | 128,000 | 93 | 32,200 | 76,400 | 75 | 15,500 | 74,400 | 82 | 16,500 |
| 16 | 121,000 | 85 | 27,800 | 77,100 | 73 | 15,200 | 73,400 | 84 | 16,700 |
| 17 | 117,000 | 79 | 24,900 | 78,600 | 76 | 16,200 | 73,400 | 72 | 14,400 |
| 18 | 113,000 | 71 | 21,700 | e79,200 | 83 | e17,700 | 72,900 | 66 | 12,900 |
| 19 | 111,000 | 68 | 20,500 | e79,400 | 76 | e16,200 | 74,700 | 65 | 13,200 |
| 20 | 110,000 | 69 | 20,400 | e79,300 | 68 | e14,700 | 79,300 | 63 | 13,600 |
| 21 | 108,000 | 70 | 20,600 | e78,900 | 71 | e15,000 | 78,700 | 66 | 13,900 |
| 22 | e105,000 | 67 | e19,000 | e79,600 | 69 | e15,000 | 76,200 | 69 | 14,200 |
| 23 | e104,000 | 59 | e17,000 | e79,700 | 72 | e15,000 | 75,000 | 70 | 14,200 |
| 24 | e105,000 | 67 | e18,900 | e78,900 | 69 | e15,000 | 74,000 | 67 | 13,400 |
| 25 | e103,000 | 60 | e16,600 | e78,400 | 73 | e15,000 | 72,800 | 67 | 13,100 |
| 26 | e99,400 | 60 | e16,100 | e78,100 | 74 | e16,000 | 72,200 | 69 | 13,400 |
| 27 | e96,400 | 64 | e17,200 | e77,000 | 57 | e12,000 | 75,400 | 72 | 14,700 |
| 28 | e95,600 | 66 | e17,900 | e77,200 | 62 | e13,000 | 83,500 | 81 | 18,400 |
| 29 | e95,500 | 63 | e16,400 | e77,400 | 67 | e14,000 | 85,300 | 96 | 22,000 |
| 30 | e95,400 | 63 | e16,300 | 81,600 | 70 | 15,400 | 84,000 | 87 | 18,900 |
| 31 | e95,200 | 64 | e16,700 | 84,600 | 65 | 14,800 | --- | --- | --- |
| Total | 4,055,500 | --- | 949,700 | 2,576,800 | --- | 485,100 | 2,546,400 | --- | 543,700 |

| | Total discharge (ft ³ /s) | Total suspended sediment discharge (tons) |
|-------------|--|---|
| Year | 59,981,700 | 31,070,300 |